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The Cosmological Dark Energy as a Standard Model Effect[1] EVAN THOMAS, FEDERICO URBAN, ARIEL ZHITNITSKY, University of British Columbia — We propose that the Dark Energy (cosmological constant) could be, in fact, a Standard Model effect which requires no new physics. We look to the infrared sector of the effective QFT of gravity and the conformal anomaly as a source for a non-clustered, homogeneous, and isotropic energy density. In this talk I will introduce our field theoretic definition for the cosmological constant, together with our proposed renormalization subtraction procedure. I will then present some preliminary results and discuss any phase transition which alters the quantum ground state as a possible source for non-zero contributions to our cosmological constant.

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